UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,563	06/30/2003	Michael J. Berardi	60655.0100	2297

20322 7590 01/08/2007

SNELL & WILMER
400 EAST VAN BUREN
ONE ARIZONA CENTER
PHOENIX, AZ 85004-2202

EXAMINER	
HESS, DANIEL A	
ART UNIT	PAPER NUMBER
2876	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/611,563	BERARDI ET AL.	
	Examiner	Art Unit	
	Daniel A. Hess	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7-15,19,23-44 and 46-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-15,19,23, 30-44 and 46-62* is/are rejected.

7)☒ Claim(s) *24-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to Applicant's RCE of 10/10/2006.

Remarks

To summarize, the basis for rejecting an infrared blocking transaction card presented herein is the following line of reasoning:

(1) Transparent cards were known in the prior art.

(2) Acrylic is common in transaction cards, especially for the purpose of acting adhesive. It would have been obvious to use acrylic in a transparent card (as in any other card) to act as an adhesive between layers.

(3) Acrylic is transparent in the visible range but opaque in the infrared.

The Examiner suspects that a number of prior art transparent transaction cards, if tested, would be found to be opaque or partly opaque to infrared radiation. This may not be due to special intent but simply because many materials which are transparent in the visible range are opaque in the infrared range.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 4, 7-15, 23, 30, 33-36, 43, 44, 46-49, 54-56, 59, 60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller (US 5,700,037) in view of Smith et al. (US 5,208,110), Tuttle et al. (US 5,988,510) and Lockwood et al. (US 5,555,877). It is noted that as applied, Lockwood is used as evidence to demonstrate inherency of a feature found in Smith, and thus is not being combined with the other two references.

Re claim 1:

Keller et al. teaches (abstract is exemplary) a transparent transaction card. The majority of the card is transparent to visible light.

Lacking in Keller et al. is infrared blocking.

Smith teaches (abstract is exemplary) binding layers in a card with an acrylic.

In view of Smith's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known acrylic adhesive to bind layers together, such as protective coatings, because acrylic is a strong and sturdy adhesive. It is well-known in the art that transaction cards are very typically made of multiple layers bound together.

Acrylic is blocking to infrared light, but transmissive in the visible range as Lockwood teaches (column 5, lines 10-15). Lockwood names several materials that are blocking in the infrared while transmissive in the visible. Lockwood gives examples of such substances including "acrylic, fiberglass, polyvinyl carbonate, and Tedlar."

Also lacking in Keller et al. is a transponder associated with the card.

Tuttle teaches (see column 7, lines 3-5), a card with radio frequency communication with an interrogator. This occurs through a transponder (column 9, line 11).

In view of Tuttle's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known transponder in the card because this greatly enhances the functionality of the card and allows for fact and even contactless transactions (such as paying for gasoline by waving the card).

Re claim 2: Tuttle refers throughout, including at column 3, line 17, to his card as a smart card.

Re claim 4: Tuttle teaches (entire document) a card with and RFID transponder system (column 9, lines 5-15): "The memory 164 receives power when the integrated circuit 154 receives power. In one embodiment, the integrated circuit 154 further includes **transponder circuitry for radio frequency communications with an interrogator unit** 104. " Tuttle also shows that such smart cards can be used to **gain access**, an application which necessarily (column 1, lines 50-60): "Smart cards can also be used as keys to gain access to restricted areas, such as secure areas of buildings, or to access parking lots." Regarding the limitations of receiving an interrogation signal, authenticating the signal and transmitting account data, this is all standard. This simply means that communication with the transponder card is made and then

an ID is transmitted from the card. Any card that is used to gain access must transmit an ID. The process of gaining access *is* authentication, and an circuit that is involved in this process would therefore be an authentication circuit. A database system with which to communicate is also inherent because in order to decide whether to grant access, the system must check if a person seeking to gain access is a valid user.

Re claim 7, the presence and use of a second transponder system would have been an obvious repetition of parts in case a first interrogation system failed.

Re claim 8, additional transparent layers would have been obvious to add additional strength as well as durability.

Re claim 9-10, 13, 14, 35: In the case of an acrylic, the acrylic is a plastic which confer blocking, both in the visible and infrared (see discussion re claim 1, above).

Again, note that the independent claim does not require that the same substance is both an infrared block and transparent at the same time.

Re claim 11: An acrylic adhesive can broadly be considered an infrared ink.

Re claim 12: The range given for concentration of ink (i.e. an acrylic adhesive, see claim 11) is very large and normal experimentation would likely arrive at a concentration somewhere in this very large range.

Re claim 15: Acrylic has some of the claimed properties.

Re claim 23: As for having multiple transponders, this can be considered repetition of parts, with the clear advantage of redundancy in case one system breaks. One would have been motivated to have such a system so that two communication channels can be open

simultaneously, increasing bandwidth, in the same way that a computer network has more bandwidth with more pathways.

Re claim 30: Batteries are discussed throughout in Tuttle; see abstract, for example.

Re claim 33: See discussion re claim 1 above. In addition there is (fig. 5, ref. 22 of Tuttle) a magnetic stripe on the card.

Re claim 34: Tuttle refers throughout, including at column 3, line 17, to his card as a smart card.

Re claim 36: See discussion re claim 1 above. In addition there is (fig. 5, ref. 22) a magnetic stripe on the card. Further, there is (column 5, lines 55+ of Tuttle) a hologram on the card in at least one embodiment.

The motivation to include a hologram is for extra security.

Re claim 43: There is in Tuttle an antenna capable of sending and receiving a signal (column 8, line 6).

Re claims 44 and 46: See figure 2 of Tuttle: transponder is in between card layers.

Re claims 47-49, 59, 60: It has already been discussed that the machine recognizable compound blocks the transmission of infrared light.

Re claims 54-56: There is a magnetic stripe on the card of Keller. Further, there is (column 5, lines 55+ of Tuttle) a hologram on the card in at least one embodiment.

The motivation to include a hologram is for extra security.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller/Smith/Tuttle as applied to claim 1 above, in further view of Koshizuka et al. (US 5,407,893).

Keller/Smith/Tuttle lacks a teaching layers are extrusion-coated together.

Koshizuka teaches (column 10, lines 15-16 and 19-20) extrusion coating to bond layers together.

In view of Koshizuka's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known extrusion coating as taught by Koshizuka into the teachings of Keller/Smith/Tuttle because this helps achieve high stiffness and excellent durability (Koshizuka , column 1, lines 5-10).

Claims 19, 37, 38, 41, 42, 52, 53 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller/Smith/Tuttle in view of Riedl (US 5,928,788).

Re claim 19: Keller/Smith/Tuttle fails to teach the use of PET plastic in the card.

PET plastic is a known material in the art to achieve durability: Riedl uses PET compounds (column 2, line 52).

In view of Reidl's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known PET in the card of Keller/Smith/Tuttle because, as Riedl notes (column 1, lines 45-50) they improve the temperature resistance and physical durability of the card as well as enhance recyclability.

Re claims 37, 41 and 42: PET plastic has been discussed re claim 19 aobve. See also discussion re claim 1, above. In the present case of Keller/Smith/Tuttle, an acrylic layer acts as an IR film.

Re claim 38: Adhering card layers with adhesive or laminate is a technique which is employed in the vast majority of all plastic cards.

Re claim 52 and 53: It has already been discussed that the machine recognizable compound blocks the transmission of infrared light.

Re claim 61: In the present case of Keller/Smith/Tuttle, an acrylic layer acts as an IR film.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller/Smith/Tuttle in view of Stock et al. (US 6011858).

Keller/Smith/Tuttle lacks biometric security.

Stock's entire patent is concerned with biometric security for a smart card.

In view of Stock's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known biometric security of stock in the smart card of Tuttle because this can reduce or eliminate fraudulent use of the card. As for connection with a power supply, this is a necessity.

Re claim 32: In one scenario or Stock (column 8, lines 5-15) data is exchanged between a card and a reader system; this is a merchant system.

Allowable Subject Matter

Claims 24-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or fairly suggest a transparent card having two transponders, wherein there is a transponder system protocol/sequence controller configured to control the order of operation of the first transponder, second transponder, transponder system authentication circuit and transponder system database, the protocol sequence controller being in communication with at least one of said first transponder, second transponder, authentication circuit and transponder system database.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Hess whose telephone number is (571) 272-2392. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel A Hess
Examiner
Art Unit 2876

12/28/2006